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Engineer Research and Development Center

Information Bulletin

Topographic Engineering Center

2002 Army Research and Development Organization of the Year

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O F F I C I A L

Patent Ceremony Scheduled

On Sept. 3, at 10 a.m. in Conference Room 1, Dr. Henry Berger (left) and Mr. Edward Bosch of the Research Division will be officially recognized in a ceremony for the issuance of U.S. Patent No. 6,563,100B1 titled "Method of Processing Measurement Data Having Errors Due to Unpredictable Non-Uniformity in Illumination of Detectors."

The reduction of errors and distortions in digital remotely sensed imagery is of primary interest to the photogrammetric community. Errors are introduced at every stage in the process, from the differing characteristics of the sensor, optical system, atmosphere, and illumination of the geographic area that is imaged. The latter group of errors is the focus the patent. Application of this patent will allow for the reduction of errors introduced through sensor illumination of the target area. There is a certain class of errors introduced into imaging that has nothing to do with the equipment used to image. Rather, it has to do with the processing of that information as individual pixels with an assumed average intensity of illumination falling thereon, an assumption that is not conducive to accurate imaging of real-world scenes.

Dr. Berger and Mr. Bosch have devised a clever mathematical manipulation during data processing that provides a much better image by eliminating this averaging at the individual pixel level. It has applications wherever a "clear picture" is needed, e.g., collecting intelligence at a distance above the earth, high definition TV, and imaging inside the body. The imaging may be done with traditional photography, IR or UV photography, active laser, radar, or sonically. For any imaging method, the Berger-Bosch process improves image accuracy, even from the most sophisticated imaging system configurations. Dr. Berger holds a doctorate in electrophysics from the Polytechnic University (formerly the Polytechnic Institute of Brooklyn). He has postgraduate

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experience in government, university-linked and industrial research and research and development, project management, and part-time teaching of advance mathematics at the university level. Mr. Bosch is a Ph. D. candidate in computational mathematics at George Mason University, Fairfax, Va. He develops mathematical models for the exploitation of multi-source digital imagery including, feature extraction, pattern recognition, dimension reduction, compression and classification.

Engineer Update Readership Survey

An on-line readership survey for the "*Engineer Update*" can be found at http://www.hq.usace.army.mil/cepa/pubs/update.htm.

Bulletin Publication Change

With the establishment of an ERDC-wide Information Bulletin, which will be published every 2 weeks, individual site Bulletins will now be published in the "off" weeks. Please keep this in mind when submitting articles and information for the site Bulletin. The next Alexandria Site Information Bulletin will be published on Sept. 4.

Handling Calls from the Media

When you receive calls from media representatives (local reporters, technical, trade, or general news media), please refer the caller to the Public Affairs Office (PAO) before responding to any questions. PAO will work with you, the reporter, and our command staff to determine how TEC as an organization can best respond. PAO will arrange an interview between you and the reporter if appropriate, and will answer any follow-up calls. This procedure will help TEC personnel prepare properly for answering media questions.

The intention of this request is not to restrict anyone's freedom to speak to the press. It will, however, ensure all concerned, when speaking as representatives of TEC, have the big picture and a complete background on the issue at hand. It also ensures the coordination with our executive staff, which is ultimately responsible for the image portrayed by TEC to the press.

FOR THE DIRECTOR:

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BOBBIE J. GALFORD
Chief, Public Affairs Office
Engineer Research and Development Center

U N O F F I C I A L

For Sale

A light gray 12' x 13' carpet is for sale. The carpet is used but in good condition. Price: $25. Call (703) 704-1348 or (703) 680-2119.